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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,847	12/09/2003	Arnold H. Bramnick	BOC9-2003-0037 (406)	5226
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Novak Druce + Quigg LLP CityPlace Tower, 525 Okeechobee Blvd. Fifteenth-Floor WEST PALM BEACH, FL 33401			EXAMINER VETTER, DANIEL	
			ART UNIT 3628	PAPER NUMBER
			MAIL DATE 06/24/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/730,847	<b>Applicant(s)</b> BRAMNICK ET AL.	
	<b>Examiner</b> DANIEL P. VETTER	<b>Art Unit</b> 3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,7 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7 and 26-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of the Claims***

1. Claims 1 and 7 were previously pending. Claim 1 was amended, and new claims 26-29 were added in the reply filed March 24, 2009. Claims 1, 7, and 26-29 are currently pending.

### ***Response to Arguments***

2. Applicant's arguments filed with respect to the rejections under § 101 have been fully considered but they are not persuasive. Applicant has amended claim 1 to recite that the method is "computer-implemented." However, the apparatus is merely recited in the preamble and does not serve to sufficiently tie the method to a particular machine. It is not clear what steps of the method are implemented with a computer and the preamble recitation does not impart any meaningful limits on the claim scope. Applicant notes the possible presence of a memory, but this is not recited in the claims. Moreover, the transformation is processing of financial data, which does not represent physical objects and thus cannot serve to transform any underlying article. See rejection under § 101 below for further explanation.

3. Applicant's arguments filed with respect to the rejections under § 103(a) have been fully considered but they are not persuasive. Examiner maintains that Yu discloses decisions on which flights to cancel for the reasons set forth in the previous Office Actions. Applicant notes that in Yu flight cancellations are part of overall schedule optimization that can also include flight delays, reassignments, etc, and argues that this is deficient because it is "not a separate decision-making process as in the present invention." Remarks, page 8. However, it is unclear that how Yu is deficient to teach flight cancellation decision-making simply because it also makes decisions on flight delays. The conclusion does not follow that Yu fails to teach the claimed invention because it discloses more that what it is claimed.

Applicant also argues that Yu does not teach real time financial data and that the term "real time" as used in Yu only refers to the decision support system. Examiner

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respectfully disagrees. Applicant notes that it is important that the claimed cancellation decision is "based on updated, not outdated financial data." Remarks, page 9. If Yu were interpreted to use outdated financial data, it would frustrate the purpose of making real time optimal flight decisions based upon their respective marginal value (see description of marginal value calculator; Yu col. 17, line 64 – col. 20, line 23). Yu's real time optimization engine requires "cost information . . . and the revenue for each specific flight." Yu, col. 8, lines 19-23. Figure 1 of Yu shows both a Data Collection Unit 12 and a Data Update Unit 13:

Continuing with the description of FIG. 1, the Data Collection Unit 12 receives complete information for stations, markets, aircraft, fleets, subfleets, maintenance, and flights from the user by way of bi-directional communication path 14. Thereafter, the Data Collection Unit 12 creates C++ objects which are supplied by way of a bi-directional communication path 15 for storage in the disk storage unit 9, and at memory locations specified by a Memory Mapping Unit 16 along a bi-directional communication path 17. Further, the Data Update Unit 13 receives revisions to the C++ objects from the user over a bi-directional communication path 18, and supplies corrections through a bi-directional communication path 19 to the objects identified by the Memory Mapping Unit 16. . . .

Thus, at any given time, the C++ objects of the Disk Storage Unit 9 reflect the existing flight environment, including identifications of protected flights which are not to be cancelled or delayed; flight sequences or routes for each aircraft; the stations or airports to be used by the aircraft; the fleets and subfleets assigned to each station; station closure times; fleet arrival and departure curfews; inviolable and violable maintenance schedules; aircraft seat capacities; fleet operational ground times; operations costs; flight disruption costs; subfleet disruption costs; and revenue and passenger information for each scheduled flight.

Yu, col. 8, line 51 – col. 9, line 16 (emphasis added). Examiner considers Yu's updated financial data representing the "existing flight environment" that is submitted to the real time optimization engine to be "real time financial data" as the term is used in applicant's disclosure; and accordingly maintains that the rejections under § 103(a) are proper.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1 and 7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

6. Claims 1 and 7 are directed to a series of steps. In order for a series of steps to be considered a proper process under § 101, a claimed process should either: (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials). *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). Thus, to qualify as patent eligible, these processes must positively recite the other statutory class to which it is tied (e.g., by identifying the apparatus that accomplishes the method steps), or positively recite the subject matter that is being transformed (e.g., by identifying the product or material that is changed to a different state). The claims do not recite any specific computerized or mechanical apparatus used to perform any steps of the process. And although the preamble suggests a physical computing environment in which the steps are intended to be performed, this alone does not place any meaningful limits on what machine actually performs the actual steps listed in the body. Moreover, no otherwise statutory subject matter is manipulated or transformed by the recited steps. While the claims do recite processing of data, the manipulated data represents revenue and other financial information rather than physical and tangible objects (i.e., underlying articles). *Cf. In re Abele*, 684 F.2d 902 (C.C.P.A. 1982) (holding a claim was directed to statutory subject matter—the transformed x-ray data represented the physical structure of bones, organs, and other body tissues). As such, the claims concretely identify neither the apparatus performing the recited steps nor any transformation of underlying materials, and accordingly are directed to non-statutory subject matter. *See also In re Bilski*, No. 2007-1130 (Fed. Cir. Oct. 30, 2008) (en banc) (clarifying the "machine-or-transformation" test; discussing *Abele* and transformations of data (slip. op. at 25-28)).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 7, and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu, et al., U.S. Pat. No. 6,314,361 (Reference A of the PTO-892 part of paper no. 20070319) in view of Lanigan, Sr., U.S. Pat. Pub. No. 2003/0061085 (Reference A of the PTO-892 part of paper no. 20080219), Walz, et al., U.S. Pat. No. 5,325,303 (Reference A of the attached PTO-892), and Creed, et al., U.S. Pat. Pub. No. 2002/0194037 (Reference B of the attached PTO-892).

9. As per claim 1, Yu teaches a computer-implemented method comprising: detecting a flight cancellation condition (col. 8, lines 51-55); determining at least two flight cancellation candidates using flight operations data including equipment, crew, and plane availability (col. 9, lines 17-28; col. 8, lines 24-26); obtaining real time flight financial data from at least one flight financial data store for each of at least two flight cancellation candidates (col. 8, lines 17-19, 29-31; col. 9, lines 6-16; col. 4, line 33); the flight financial data including a value of passenger tickets (col. 18, line 63 – col. 19, line 2), and cost associated with operating an aircraft of each of the at least two flight cancellation candidates (col. 8, lines 29-31); processing said flight financial data for said flight cancellation candidates to determine for each flight cancellation candidate an amount of revenue lost by canceling a flight corresponding to a particular flight cancellation candidate (col. 8, lines 22-23, 55-56; col. 9, lines 20-28; col. 10, lines 6-14), wherein amounts of revenue include values for coupons held by passengers assigned to each flight corresponding to the particular flight cancellation candidate (col. 18, line 61 - col. 19, line 2); presenting for each flight cancellation candidate the amount of revenue lost determined based upon the financial data for said flight cancellation candidates (col. 8, lines 22-23, 56-57; col. 9, lines 29-31); and selecting from among said at least two flight cancellation candidates a flight cancellation candidate and canceling the flight corresponding to the selected flight cancellation candidate if the amount of revenue lost by canceling the corresponding flight is less than the revenue

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lost by canceling any other flight corresponding to a non-selected flight cancellation candidate (col. 10, lines 1-14; col. 11, lines 53-55).

Yu does not explicitly teach that flight financial data includes a value of cargo, and amounts of revenue include values for time-critical cargo; which is taught by Lanigan (§ 0038). It would have been prima facie obvious to one having ordinary skill in the art at the time of invention to include values for time-critical cargo as taught by Lanigan into the broadly disclosed flight revenue values of Yu because this is merely a combination of old elements, and in the combination each element would have performed the same function it did separately (i.e., identify a portion of total flight revenue). One of ordinary skill in the art would also have recognized that the results of the combination were predictable and could be implemented through routine engineering. Similarly, Yu does not teach that the financial data includes a value of United States Postal Service (USPS) mail; which is taught by Walz (col. 103, lines 48-57). It would have been prima facie obvious to one having ordinary skill in the art at the time of invention to incorporate this data for the same reasons set forth above. Finally, while Yu teaches aircraft and flight operating costs generally (e.g., col. 8, lines 29-31), it does not explicitly teach that this is including crew and fuel cost; which is taught by Creed (§ 0004). It would have been prima facie obvious to one having ordinary skill in the art at the time of invention to incorporate this data for the same reasons set forth above. These further additions of specific types of data to Yu would lead to the predictable result of an enhanced flight optimization engine that makes cancellation decisions based upon a greater number of financial considerations.

10. As per claim 7, Yu in view of Lanigan, Walz, and Creed teaches the method of claim 1 as described above. Yu further teaches said flight financial data store comprises at least one selected from the group consisting of cargo, crew, reservations, and flight operations information (col. 8, lines 29-31, 40-42).

11. As per claims 26 and 27, Yu in view of Lanigan, Walz, and Creed teaches the recited system for determining flight cancellations. These claims are being treating under § 112, sixth paragraph. Examiner has identified the corresponding structure for performing the recited functions as a computerized system and associated hardware

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elements programmed with operational optimization software (see ¶¶ 0014-15 of the published application). This is the same structure disclosed in the prior art (see citations and rationale for claims 1 and 7 above; Yu, col. 7, line 50 – col. 9, line 19, Fig. 1).

12. As per claims 28 and 29, Yu in view of Lanigan, Walz, and Creed teaches the recited storage containing an executable program for determining flight cancellations (see citations and rationale for claims 1 and 7 above; Yu, col. 7, line 50 – col. 9, line 19, Fig. 1).

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL P. VETTER whose telephone number is (571)270-1366. The examiner can normally be reached on Monday through Thursday from 8am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on (571) 272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHN W HAYES/

Supervisory Patent Examiner, Art Unit 3628